

*Preschool Services for Children Who are Deaf or Hard-of-Hearing  
in  
North Carolina*



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*The Current State of Services & Recommendations*

*A Report of the North Carolina Preschool Deaf and Hard-of-Hearing Taskforce*

*Commissioned by the North Carolina Department of Public Instruction, in collaboration with the North Carolina Department of Health and Human Services, for the North Carolina Council for the Deaf and Hard-of-Hearing*

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### **Message from Program Leadership,**

On behalf of our respective programs, we wish to thank the members of the Preschool Deaf and Hard-of-Hearing Taskforce who devoted many hours in the development of “The Current State of Services and Recommendations for Preschool Children who are Deaf or Hard-of-Hearing in North Carolina.” This was a collaborative effort that demonstrated thoughtful, persistent efforts in gaining information about the current challenges and successes in early childhood programs serving deaf and hard-of-hearing children in North Carolina. Many thanks to all the personnel and administrators who took part in the statewide survey conducted in October, 2009.

We hope that information contained within this report will be useful for state planners and local administrators in program self-assessment and continuing plans for improvement. The ultimate goal is to provide well rounded Child Find programs that are successful in conducting early detection and identification, provide timely transitions for children identified and served as infants and toddlers, and deliver effective education and intervention services to assure positive child outcomes for children who are deaf or hard-of-hearing.

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## **Acknowledgements**

Identifying and providing services for deaf or hard-of-hearing (D/HH) preschoolers has presented many challenges over the past 10 years for the public school preschool system. Issues such as Child Find, successful transition from the NC Early Intervention Program, available service delivery models provided in the schools (LEAs), and the professional development needs of personnel serving this population of children have been of concern. This Task Force recognizes that there are no simple solutions to these challenges. However, we believe that we can do better and that we must continue to pursue any and all avenues that will result in program improvement. This report is the result of many hours of thought, discussion, input from experts, investigation of programs in other states, and deliberation. We thank all of the taskforce members who contributed to the content of these recommendations and hope they will assist in guiding program improvement for the purpose of assuring positive outcomes for all preschoolers who are deaf or hard-of-hearing.

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## Introduction

Approximately one of every 1,000 infants is born deaf while six of every 1,000 are born with some degree of hearing loss. Permanent hearing loss at birth annually affects 24,000 infants in the USA; that is, six infants per 1,000 will have a hearing loss in at least one ear that will affect communication, cognition, and educational development (BEGININGS, 2009). The Individuals with Disabilities Education Improvement Act (IDEA) includes parts of the law which covers services for children birth to age three (Part C) and three to age five (Part B, 619). In North Carolina, the Early Intervention Program for Children Who are Deaf or Hard-of-Hearing (D/HH) and the Part C (IDEA) programs provide services to infants and toddlers who are deaf or hard-of-hearing. Services are provided in the home or child care center, with a concentration on language and communication skill development (Office of Education Services, 2009). At age three, staff from the Early Intervention and Preschool programs work collaboratively to transfer services from Part C to Part B programs. The timely transition of services is included in IDEA, and the Office of Special Education Programs (OSEP) incorporated it into the State Performance Plan/Annual Program Report as a compliance indicator. The timely transition of services for a young child with a disability is considered a critical element in providing a free appropriate public education (FAPE).

During 2007, the North Carolina Council for the Deaf and Hard-of-Hearing requested that representatives from the Department of Public Instruction (DPI) and the Department of Health and Human Services (DHHS) form a taskforce with the purpose of reviewing the state of services for preschool D/HH children in North Carolina. Particular concerns were raised about difficulties reported within the transition process, and challenges faced in establishing eligibility for Part B services. A cross-sector taskforce was assembled through the Office of School Readiness/DPI and began meeting in October 2007. The purpose of this report is to provide information gleaned from study and provide recommendations for improvement. Four topics were selected for study and discussion:

- Identify challenges in the eligibility determination process (Child Find);
- Identify barriers to the facilitation of a smooth transition;
- Identify available service delivery models offered across regions and the state; and
- Identify the professional development needs of providers in order to adequately develop a recommended statewide plan for training.



The taskforce chose to study Child Find, Service Delivery Models, and Professional Development (PD) needs through a regional analysis in order to facilitate regional PD plans and inform the LEAs of resources within their immediate region related to service delivery models and program development. There are eight recognized regions, or districts, as defined by the North Carolina State Board of Education.

The taskforce researched, collected and analyzed a variety of information about current challenges and guidance provided by OSEP. It constructed a Zoomerang survey for a cross-sector group of providers serving D/HH preschoolers to gain more information about suspected barriers, service delivery models, and professional development needs. Information about Child Find for preschool D/HH was gathered by summarizing data from the April 1, 2009 Child Count and analyzed according to individual LEAs and regions. Information about the available Service Delivery Models was included in this analysis and was taken from the Zoomerang survey.

## **Demographics of the Survey Respondents**

Widespread distribution of the survey occurred in October 2009 to electronic listserves for the Exceptional Children Directors and Coordinators, Head Start Programs, Developmental Day Programs, Speech-Language Pathologists, Occupational and Physical Therapists, and Early Interventionists. Two hundred fifty-three (253) professionals responded to the entire survey from 97 of the 100 counties. The largest group of professionals represented among the respondents was Speech-Language Pathologists (20%), followed by Itinerant Teachers (16%), Preschool Coordinators (11%), Lead Classroom Teachers (9%), and Early Interventionists (9%). Programs represented included:

- 81% from public schools – special education and regular education programs
- 9% from early intervention
- 4% from private preschools
- 3% from Smart Start/Partnership for Children
- 2% from Head Start
- 1% from other programs

Of the 253 respondents, the following summarizes the number of years respondents reported working with preschoolers who are deaf or hard-of-hearing:

- 27% - more than 10 years
- 24% - 3 to 5 years
- 21% - less than 2 years
- 17% - 6 to 10 years
- 10% - no experience

## Child Find for Preschool D/HH, Spring 2009

In order to gain a broader understanding of where the D/HH preschool children are located in North Carolina, an in-depth analysis of the April 1, 2009 headcount was conducted. Data from the 15 city school systems were combined with the counties in which they are embedded. The number of children categorized as “deaf” or “hard-of-hearing” were added together for the purposes of this report. A map of the number of preschool D/HH children in each county and regions is depicted in Appendix 1.

- Forty-nine LEAs reported no preschool children classified as D/HH
- Fifty-seven LEAs reported 1 to 5 preschool D/HH children
- Five LEAs reported 6 to 10 preschool D/HH children
- Three LEAs reported 11 to 15 preschool D/HH children
- One LEA reported 16 or greater preschool D/HH children

Preschool children classified as D/HH represent approximately 2% of the total number of preschoolers with disabilities in North Carolina (238 out of 14,392) and is the fourth largest area of disability for the preschool population.

Figure 1. Regional breakdown of Preschool D/HH Children, April 1, 2009

Region and Number of D/HH Preschoolers	
<b>Region 1</b> <ul style="list-style-type: none"> <li>▪ 11 LEAs = 0 children</li> <li>▪ 3 LEAs = 1-5 children</li> <li>▪ 1 LEA = 6-10 children</li> </ul>	<b>Region 2</b> <ul style="list-style-type: none"> <li>▪ 8 LEAs = 0 children</li> <li>▪ 6 LEAs = 1-5 children</li> </ul>
<b>Region 3</b> <ul style="list-style-type: none"> <li>▪ 4 LEAs = 0 children</li> <li>▪ 8 LEAs = 1-5 children</li> <li>▪ 0 LEAs = 6-10 children</li> </ul>	<b>Region 4</b> <ul style="list-style-type: none"> <li>▪ 4 LEAs = 0 children</li> <li>▪ 7 LEAs = 1-5 children</li> <li>▪ 1 LEA = 6-10 children</li> </ul>

<ul style="list-style-type: none"> <li>▪ 1 LEA = 11-15 children</li> <li>▪ 1 LEA = 16 or greater</li> </ul>	
Region 5 <ul style="list-style-type: none"> <li>▪ 4 LEAs = 0 children</li> <li>▪ 9 LEAs = 1-5 children</li> <li>▪ 1 LEA = 6 to 10 children</li> <li>▪ 1 LEA = 11-15 children</li> </ul>	Region 6 <ul style="list-style-type: none"> <li>▪ 0 LEAs = 0 children</li> <li>▪ 7 LEAs = 1-5 children</li> <li>▪ 1 LEA = 6-10</li> <li>▪ 0 LEA = 11-15 children</li> <li>▪ 1 LEA = 16 or greater</li> </ul>
Region 7 <ul style="list-style-type: none"> <li>▪ 9 LEAs = 0 children</li> <li>▪ 10 LEAs = 1 – 5 children</li> </ul>	Region 8 <ul style="list-style-type: none"> <li>▪ 9 LEAs = 0 children</li> <li>▪ 7 LEAs = 1-5 children</li> <li>▪ 1 LEAs = 6 – 10 children</li> </ul>

## Current Challenges to Establishing Eligibility for Services

The taskforce hypothesized the following top challenges:

- Apparent misinterpretation of the eligibility determination questions pertaining to what constitutes “adverse effect on educational performance” and what is “specially designed instruction” for preschool children.
- Apparent over-reliance on standardized assessment measures for young children with hearing loss.

During the discussions around the eligibility determination process, the taskforce was given the opportunity to weigh in on a guiding practice statement being developed by another preschool stakeholders group in FFY 2008 around “what constitutes adverse effect on educational performance” and “specially designed instruction” for preschool children. This work was undertaken due to repeated requests for advice around this subject from preschool coordinators and diagnosticians. Members from the Preschool D/HH taskforce gave input to the final statement and consensus was reached for its inclusion into a guiding practices document that is under development.

On the Zoomerang survey, 179 respondents said they had participated in eligibility determination meetings for preschool D/HH children within the LEAs. Following are the results of their responses to questions about information used during the eligibility determination process:

**Assessment Measures Utilized.** When asked if all existing, relevant and timely information was utilized in the determination process, 97% of the respondents said “yes.” This information included anecdotal notes or observation information (reported by 94% of respondents), parent information (reported by 85% of respondents “most of the time;” 14% “some of the time;” 1% “rarely or never”), and non-standardized assessments (66% reported “most of the time;” 31% “some of the time;” 3% “rarely or never”).

**Eligibility Determination Decision Making.** When asked if the eligibility determination decisions appeared appropriate, 85% of respondents indicated “most of the time” and 15% said “some of the time”. Seventy-four percent (74%) of respondents reported that IEP meetings had representatives knowledgeable about early child development and hearing loss. Fifty-one percent (51%) noted that

eligibility determination decisions were primarily based on standardized test results, discounting other non-standardized information. Forty-nine (49%) noted that children who receive significant levels of early intervention services and who appear to be functioning within age level expectation were typically considered to be “not eligible” for services. The lack of available or appropriate resources was reported to be barriers to determining eligibility and providing services by 29% of respondents.

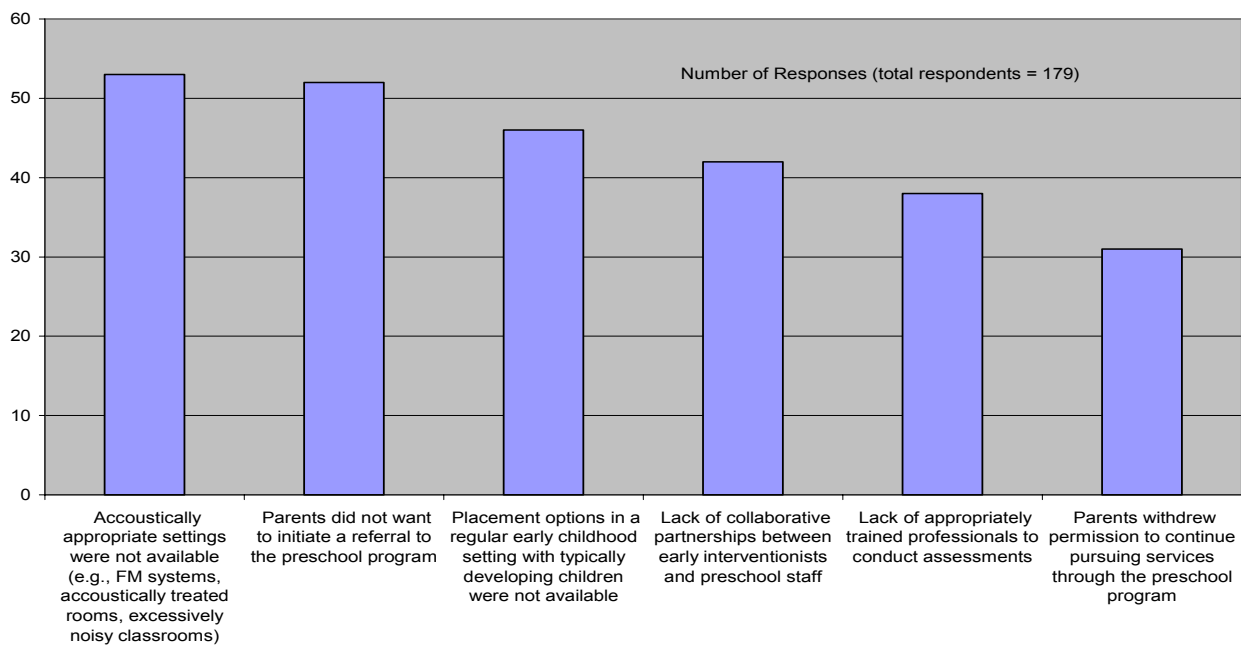
**Team Collaboration.** Respondents who attended eligibility determination meetings reported that team collaboration appeared to be high 65% of the time, medium 30% of the time, and low 5% of the time. Conflict that arose during meetings was said to be resolved 94% of the time.

## **Challenges to Successful Transition from Early Intervention to Preschool Program**

**Background Information.** North Carolina’s Part B preschool program’s performance on the State Performance Plan for transition was determined to be “in need of intervention” by OSEP based on the performance from FFY 2006 (42% compliance.) This necessitated the development of a major PD effort around transition and conducting entry level eligibility assessments (Child Find.) Eighteen transition training workshops were conducted across the state in FFY 2007, 2008, and 2009 in which the Part C, B, Early Intervention Program for Children Who are Deaf or Hard-of-Hearing, Governor Morehead Preschool Program (Visually Impaired) and others came together to learn about the issues around transition. In the spring of 2009, the jointly developed (Part C and B) “NC Guiding Practices for Early Childhood Transition” document was also released. Further, in FFY 2007 and 2008, fall and spring regional preschool coordinators’ meetings and on-site technical assistance visits were conducted. In FFY 2008, the Preschool Assessment Center Initiative began in which an evidence-based model was established for: 1) transdisciplinary play-based assessments; 2) communicating effectively with families using the Touchpoints Model (Brazelton, 2007); and 3) establishing effective and efficient business processes to ensure timely placements. Currently there is a best practice Preschool Assessment Center/Team within each of the eight regions that is conducting on-site visits to LEAs and providing PD opportunities to assessment teams wishing to adopt the best practice model. As a result of this PD effort, North Carolina successfully demonstrated timely transitions for children from early intervention Part C into preschool Part B program 93% of the time during FFY 2008.

**Continued Barriers to the Transition Process.** On the Zoomerang survey, respondents were asked to check all of the six listed potential barriers they thought continued to exist in the transition process within their area of practice. Figure 2 depicts the percent of respondents who felt these barriers continue to exist.

**Figure 2. Barriers To Transition for Preschool Deaf and Hard of Hearing Children**



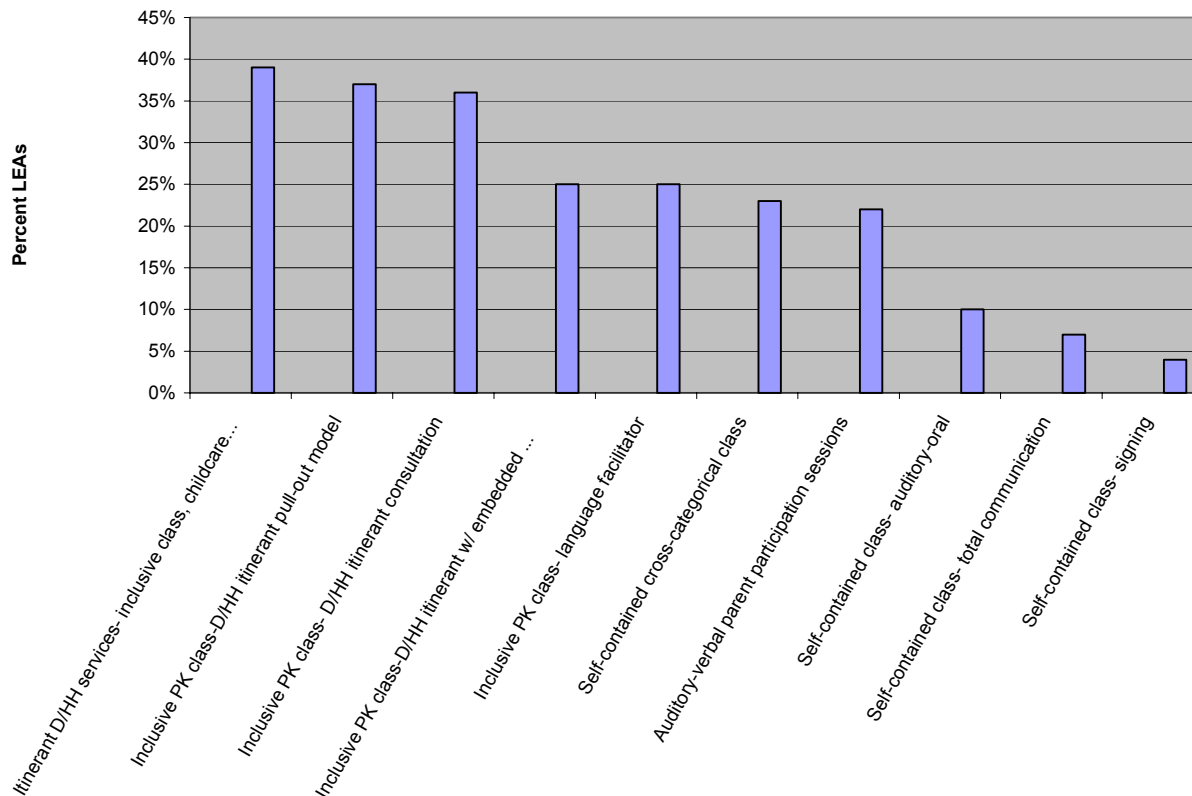
Of the 179 participants who responded to this section of the survey, 53 (30%) noted the lack of acoustically appropriate settings as a reason for concern during the placement process, 52 (29%) noted parents did not want to initiate a referral prior to placement, and 46 (26%) respondents noted a lack of inclusive preschool settings as barriers to placement in the school setting.

## Service Delivery Models Used Across North Carolina

Respondents were asked to identify which of ten service delivery models were provided in their LEAs. These delivery models included itinerant services in LEA-run programs or in childcare, different types of service delivery models provided in inclusive and self-contained settings, and if the LEA provided parent participation auditory-verbal sessions. Appendix 2 is a state map with the various service delivery models provided in each county. Inclusive classroom models using consultative services,

direct pull-out and embedded interventions were collapsed into one category on the map. However, Appendix 3 provides a complete breakdown of all ten service delivery models by LEA and within each region. The numbers within each service delivery model represents how many survey respondents said that delivery model was provided. Figure 3 depicts the overall prevalence of the various service delivery models utilized in the state.

**Figure 3. State Data-Service Delivery Models for D/HH Preschool Children**



D/HH preschool children in North Carolina appear to be served predominantly by itinerant teachers with certification in D/HH and speech-language pathologists in childcare settings and in inclusive preschool classes with Birth-to-Kindergarten classroom teachers. The pullout model of direct service delivery was ranked as the most common, with consultation to the classroom staff as second. The embedded intervention approach, where specialists teach classroom staff/families to embed intervention goals into the routines of the class and general education curriculum instruction, was ranked third. According to information from the 619 Preschool Grant in FFY 2008, there were 743 inclusive classes reported statewide. Approximately 21% of those classes were supported with IDEA funds plus funding from one other regular preschool program (More at Four, Title I PK, Head Start).

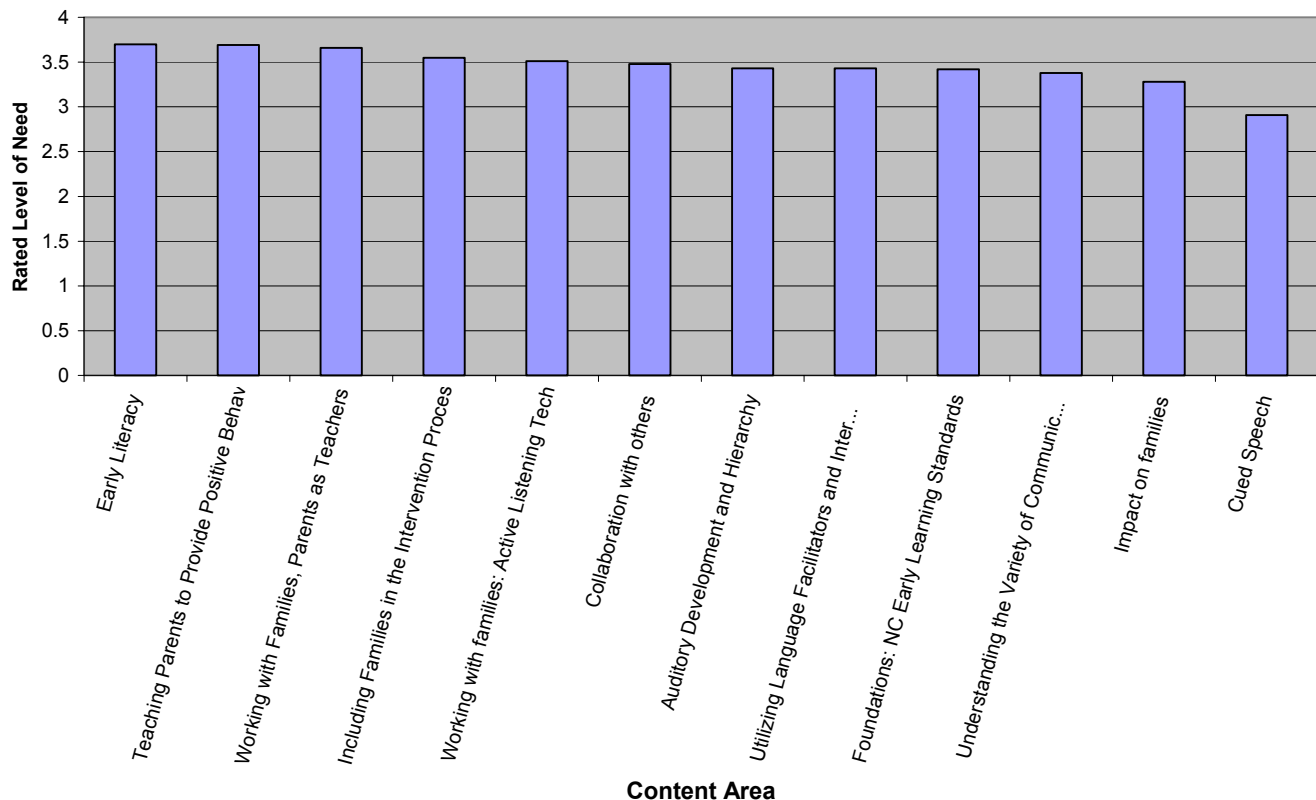
Approximately 79% of inclusive classes reported being supported by IDEA funds and two or more regular preschool program funds. Therefore, the network of services provided to all children with disabilities, including D/HH preschoolers, has been built upon a strong collaborative base.



## Professional Development Needs of Personnel Serving Preschool Deaf or Hard-of-Hearing Preschoolers

Twelve PD content areas were included in the query. Responses were analyzed for each of the eight regions in order to facilitate regional PD plans in the future. It must be remembered that 81% of the respondents were employed in the public school system. Further, 20% of the respondents were Speech-Language Pathologists, 16% were Itinerant D/HH Teachers, 11% Preschool Coordinators, 9% Lead BK Classroom Teachers, and 9% Early Interventionists. Appendix 4 provides a regional analysis of the PD rankings. Figure 4 represents the state level data of rated PD needs for this population of providers.

**Figure 4 State Level Need for Professional Development**



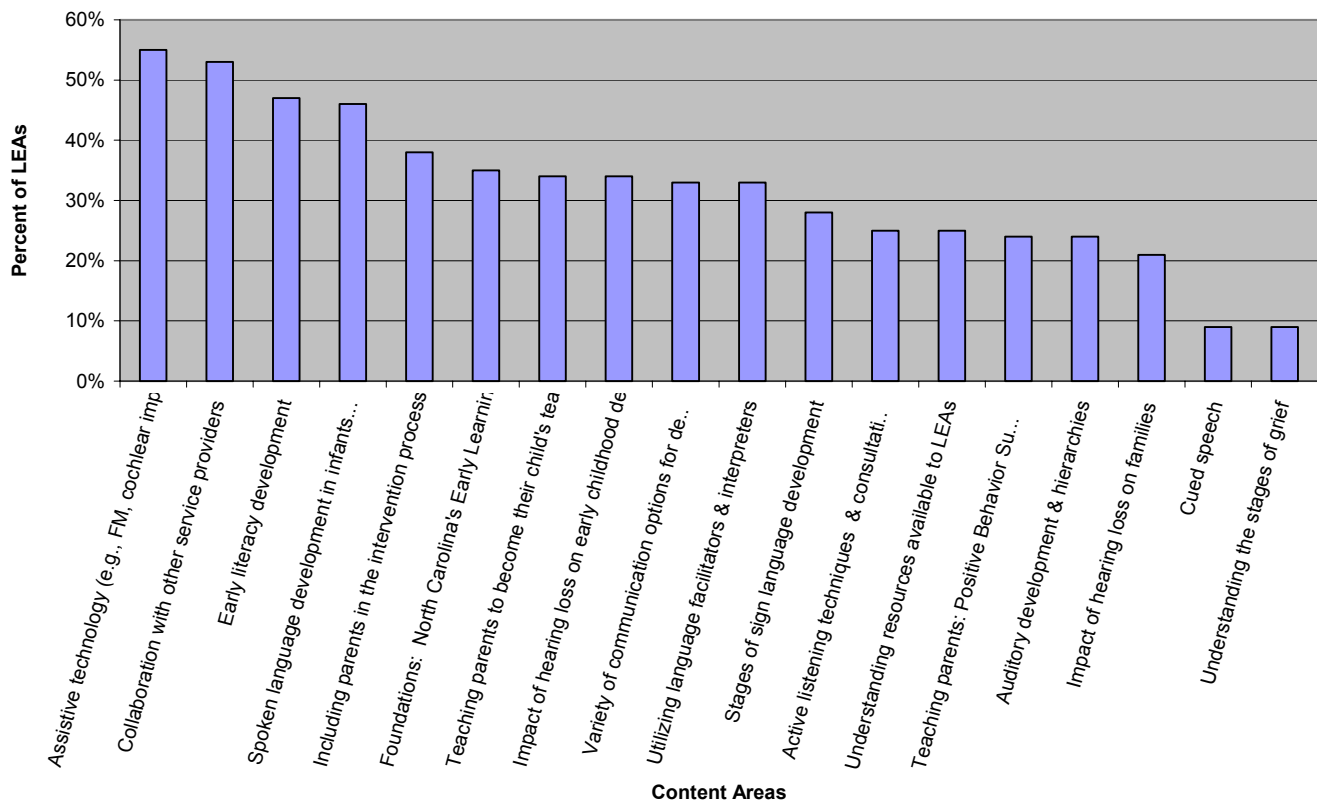
Respondents were asked to rank their PD needs on a scale of 1 to 4 with 4 being the greatest need. Nine out of the 12 PD areas were rated similarly; indicating a need for PD opportunities in most of the content areas. The top three PD needs were early literacy, teaching parents to provide positive behavior supports, and working with families/parents as teachers. This kind of information is of great importance for state level planning, and suggests that specialized service providers have similar needs as preschool classroom teachers. PD planners need to remember that while specialized professionals need PD in their area of expertise, they may also have PD needs about early childhood development and instruction since they may not have had formal training in these areas.

Information such as this may prove invaluable when coming together with state PD planners from the larger early childhood community so that joint PD opportunities may be planned, collaboratively planned, resources shared, and the most qualified PD providers are identified in each region.

### **Professional Development Opportunities Currently Offered**

In order to identify regional resources for PD opportunities and to see if current opportunities matched the needs of the professionals, we asked respondents to indicate the content areas in which they currently receive training in their place of work. The top PD content areas reported as being offered related to the “assistive technology needs of the D/HH children.” The second and third top ranked content areas included “collaboration with other service providers” and “early literacy development.” PD plans need to be coordinated based on the needs of the providers as well as the needs of the children. Since topics around working with families were identified as a strong area of need for PD, the state and LEAs need to consider identifying and developing PD opportunities around evidence-based practices when working with families (effective listening skills, coaching, consultation, etc.), how to embed interventions into the home environment, and teaching parents how to provide positive behavior support.

**Figure 5 State Level Professional Development Provided by LEAs**



## Discussion and Recommendations

The trends in the number of children identified as D/HH are interesting and beg further study. While Region 1 contains 15 LEAs, only 4 LEAs reported having between 1 to 5 children classified as D/HH. Eleven LEAs reported zero (0) preschoolers in this disability category. It is suspected that many of the children with hearing loss in North Carolina are categorized as having other disabilities. Since North Carolina does not require data submission on secondary disability categories, this may present a barrier to identifying Child Find issues such as hearing loss. Data suggest that more than 40% of children with hearing loss have another disability (Gallaudet Research Institute, 2002). However, one would not reasonably expect to see no children categorized as D/HH in so many LEAs within one region. This suggests the need to further identify the root cause of this Child Find problem, perhaps the lack of available personnel or in the training of personnel to adequately identify hearing loss in very young children. Child Find for hearing loss in very young children is a community-wide health and education issue around policies for early detection and awareness. These policies ultimately impact the school

system Child Find efforts. Most, but not all, children in North Carolina receive a hearing screening at birth. However, even children who are screened at birth may experience late onset hearing loss that is not identified until they enter Kindergarten, unless parents or physicians make a referral prior to this time. Health issues impacting hearing in young children are common during this timeframe. These issues could significantly impact a child's school readiness and subsequent success. The issue of Child Find is cross-sector, complicated and on-going.

The committee's concern about the over-reliance on standardized tests for entry level assessments did not appear to be a continuing problem since 97% of respondents said that all existing, timely, and relevant information was used. Hopefully this is a positive result of the state's most recent emphasis on professional development for preschool assessments. However, when making eligibility determination decisions, 51% of the survey respondents said that decisions were primarily based on standardized test results. Guidance is being developed to help answer the eligibility determination questions for young preschoolers about whether a delay/disorder has an adverse effect on educational performance. When completed, this guidance may affect changes within LEAs from an overreliance on a limited number of standardized tests to the inclusion of non-standardized assessments in helping determine the need for special education.

The identified top barrier to placement into the preschool program was the lack of acoustically appropriate settings. While parents wish for their children to be served in inclusive preschool settings, the acoustical environments of inclusive classes are not always optimal. This is a factor frequently overlooked by general educators when designing their programs and classrooms. However, the acoustic environment of the classroom can negatively affect a child's success in learning; both in typically developing and in hard-of-hearing children. According to national standards, the classroom noise levels should not exceed 35 dBA (ANSI, 2009; Crandell, 1991; Finitzo, 1988) and classroom reverberation times should not exceed 0.4 s (ANSI, 2009, ASHA, 1995). Reverberation is another acoustic factor that impinges on the acoustic environment in the classroom. This feature is dependent upon the physical properties of the classroom and its contents. Reverberation is the persistence of sound within an enclosure that is created by sound waves reflecting off hard surfaces in the room (Nabelek & Pickett, 1974) and thus blurs the direct sound energy of the teacher's voice. The average school age classrooms have reverberation times between .4 and 1.25 s (Crandall and Bess, 1987) and

noise levels from 41 to 51 dBA (Bess, Sinclair, & Riggs, 1984). Another pertinent factor is the preschool child's hearing ability. Ideally, all children would experience normal hearing. However, on any given day about 43% of typically developing early elementary school children fail a pure-tone screening (Flexer, Wray, & Ireland, 1989). In the preschool years, the incidence of middle ear infections is significantly greater than in older elementary students and has been directly linked to language and developmental delays (Watt, Roberts and Zeisel, 1993). Hard-of-hearing preschoolers are not immune to this problem either. In addition to a residual hearing loss, they experience fluctuating hearing loss as a result of middle ear infection. Sound field equalization is a classroom listening solution that consists of creating an environment where each child is a favorable speaker-listener distance by routing the teacher's voice to loudspeakers around the room. A wireless microphone is placed near the teacher's mouth and the signal is sent to an amplifier that drives loudspeakers around the room. The teacher does not need to use a louder voice, and each child can hear what the teacher is saying from anywhere in the classroom. The use of sound field systems in educational school age settings has been reported to improve the audibility and clarity of the teacher's voice (signal-to noise ratio, ASHA, 2000), and results in increased attention span, reduced distractibility, and increased sound awareness and discrimination (Smaldino &, Flexer, 2008, Johnson, 2001. Blake et al, 1991, Casterline, Flexer, & DePompei, 1989). The implications for use of sound field systems in inclusive preschool classrooms are evident and a state level strategy needs to be developed to make all preschool and exceptional children programs aware of the need to include them into the design and delivery of their programs.

The second highest challenge to transition dealt with families not wanting to pursue services in the preschool program. Reasons for parents choosing not to pursue services in the preschool program cannot be easily tracked since the family outcome surveys conducted for the state performance plan (Indicator 8) are only gathered from families of children enrolled in the preschool program. In many cases, the reason is simply a matter of family choice due to familiarity with current service providers and ease of access based on family schedules. Another related factor is a family not wanting to undergo a change in service providers and the transition process itself. For some families, parents are not ready to send their child to the LEA program at the age of three. A recommendation may be to analyze these data by county to identify potential trends where families are predominantly rejecting

LEA services. If a trend exists, then root causes may be sought by asking the early intervention program to track potential reasons for parental choices.

The most requested content area for training was in Early Literacy facilitation. Interventionists understand how important this content area is to a young D/HH child, and all at-risk children's success in school. Regular classroom teachers in the school-age program typically are provided a large amount of PD in literacy. However, this is not the general case for early childhood educators and specialists. Further, not all providers understand the continuum of development in emergent literacy and how it is inextricably related to language development. To facilitate emergent literacy development one must also facilitate language development. This is why the NC Early Childhood Standards classifies Emergent Literacy under the Communication domain.

Many preschool D/HH children are also language impaired or delayed. When educating children from lower socioeconomic groups, from a non-English background or with language impairments, it may be important to improve teacher and service provider proficiency in language facilitation because these children are at increased risk for delays in the development of language and, thus, literacy (Hecht, Burgess, Torgesen, Wagner, & Rashotte, 2000; Locke, Ginsborg, & Peers, 2002; Qi, Kaiser, Milan & Hancock, 2006; U.S. Department of Education, 2001). Furthermore, impaired language abilities of young children may limit their opportunities to interact with and benefit from literacy events (Marvin, 1994; Schuele & van Kleeck, 1987). Marvin and Wright (1997) noted that interactions between children with language impairments and adults during shared book reading activities are not well supported or encouraged in the home. These children are less likely to listen to stories or ask or answer questions of an adult who is reading aloud. Therefore, the duration of the time spent reading and the frequency of repeated shared reading events was reduced when compared to such interactions between non-delayed children and adults. Further, development of literacy socialization (i.e., using print material in a meaningful way in early stages of play development) may also limit children's meaningful engagement with print. Therefore, teaching parents to facilitate emergent literacy and language development should also be factored into the PD planning for staff serving young at-risk and disabled children.

Related service providers and itinerant teaching staff are the primary points of contact with preschool/childcare staff and families. Based on results from this survey, the most prevalent service delivery model reported was the pullout model of intervention. While it is frequently necessary to provide individual instruction in a quiet environment, it is also necessary to understand that strategies and accommodations taught in those settings must be embedded into the classroom or family routines in order to maximize child outcomes. Research (McWilliams, 1995) has clearly shown that when a team approach is utilized and intervention strategies are intentionally embedded into the group/home setting, children make significantly greater progress. However, teaching others to intentionally embed specialized instruction into classroom routines and curricula is relatively new and is not widely taught in university training programs for speech pathologists and itinerant teachers. State/regional level PD opportunities dealing with consultation, embedding interventions and team building for these professionals will have significant impact on their ability to communicate with and teach others how to implement specialized instruction.

The state has begun to provide regional professional development planning for the areas of greatest need as reported by the service providers. However, the indicated needs of this cohort of professionals do not appear to be widely different than those of other early childhood educators. Special emphasis may need to focus on teaching professionals how to work and communicate effectively with families. This area does not appear to be a common content area provided in current PD opportunities.

PD resources and trainers currently existing within the regions need to implement effective PD opportunities for specialized providers as well as for general educators in the public and non-public sector. One of the most daunting realizations in the current analysis of North Carolina's early childhood outcome data (Part B 619) is the fact that many children served by the IDEA Part B preschool program are in regulated childcare programs or in the home with the families while being served in an itinerant service delivery model by special education staff. This was the highest service delivery model reported on the statewide survey. While IDEA programs are being made accountable for early childhood outcomes (e.g., outcomes are measured and compared against targets set within the state performance plan), the Part B preschool program may not be directly involved in PD opportunities for the workforce that impacts these children's outcomes. Linkages must be established between the PD system for the Part B preschool programs and nonpublic childcare centers in order to

ensure positive child outcomes for children with special needs being served in these locations.

Information about relevant PD opportunities must be opened to all personnel serving children with special needs, not only the special education providers.

The committee suggests the following *Blueprint for Change* as a way of improving services for all preschoolers in North Carolina who are deaf or Hard-of-Hearing:

Current Challenges	Blueprint for Change
<p><b>Child Find</b></p> <ul style="list-style-type: none"> <li>◆ Number of D/HH identified children in targeted regions of the state appears to be limited.</li>   <li>◆ More weight may be placed by IEP Teams on standardized test results to answer eligibility determination questions, when reviewing all existing, timely, relevant, standardized and non-standardized assessment information.</li> </ul>	<ul style="list-style-type: none"> <li>◆ Identify the root cause for the apparent lack of children in particular regions of the state and develop regional strategies to approach that problem. Sub-bullet <ul style="list-style-type: none"> <li>▪ Investigate the comparison between the number of newly identified children from BEGINNINGS and those enrolled in the Early Intervention and Preschool Programs.</li> </ul> </li>   <li>◆ Verify the appropriate use of D/HH eligibility categories, particularly in regions of the state serving few children in the D/HH category.</li>   <li>◆ Develop guiding practices about the need for IEP teams to include professionals who are knowledgeable of early childhood development and hearing loss.</li>   <li>◆ Complete guiding practices about the interpretation of “adverse effect on educational performance” for preschool children.</li>   <li>◆ Develop guiding practices about the use of informal assessments and behavioral data, along with standardized test data, to determine the eligibility for Part B services of children who are D/HH</li> </ul>
<p><b>Transition from Early Intervention</b></p> <ul style="list-style-type: none"> <li>◆ Availability of acoustically appropriate</li> </ul>	<ul style="list-style-type: none"> <li>◆ Develop state level strategies to make all</li> </ul>



<p>environments in preschool classrooms.</p> <ul style="list-style-type: none"> <li>◆ Families not wanting to pursue services in the preschool program.</li> </ul>	<p>preschool and exceptional children programs aware of the need to include sound field systems in the design and delivery of their programs.</p> <ul style="list-style-type: none"> <li>◆ Analyze LEAs where parents were most likely not to want to pursue services and identify potential trends.</li> <li>◆ Develop strategies to collect data for “parent reasons” related to their not pursuing services in the public schools.</li> </ul>
<p><b>Service Delivery Models</b></p> <ul style="list-style-type: none"> <li>◆ Capacity for providing appropriate services for children with hearing loss is not available in all 115 LEAs.</li> </ul>	<ul style="list-style-type: none"> <li>◆ Develop strategies for increasing service delivery models in LEAs where options are limited.</li> <li>◆ Provide PD for itinerant teachers and related service providers on embedded intervention practices and developing skills for consultation to classroom staff.</li> </ul>
<p><b>Professional Development Needs</b></p> <ul style="list-style-type: none"> <li>◆ Providing PD opportunities to meet the differing needs of professionals within each region.</li> </ul>	<ul style="list-style-type: none"> <li>◆ Increase PD opportunities around content areas dealing with effective communication with families.</li> <li>◆ Increase PD opportunities around the continuum between language development and emergent literacy in D/HH preschoolers.</li> </ul>

<b>Professional Development Opportunities</b>	<ul style="list-style-type: none"><li>◆ Develop regional professional development plans in conjunction with the wider early childhood community including those in the non-public sector.</li></ul>
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- |   |   |
|---|---|
| <ul style="list-style-type: none"><li>◆ Providing effective PD to service providers who do not have access.</li></ul> | <ul style="list-style-type: none"><li>◆ Develop regional professional development plans in conjunction with the wider early childhood community including those in the non-public sector.</li></ul> |
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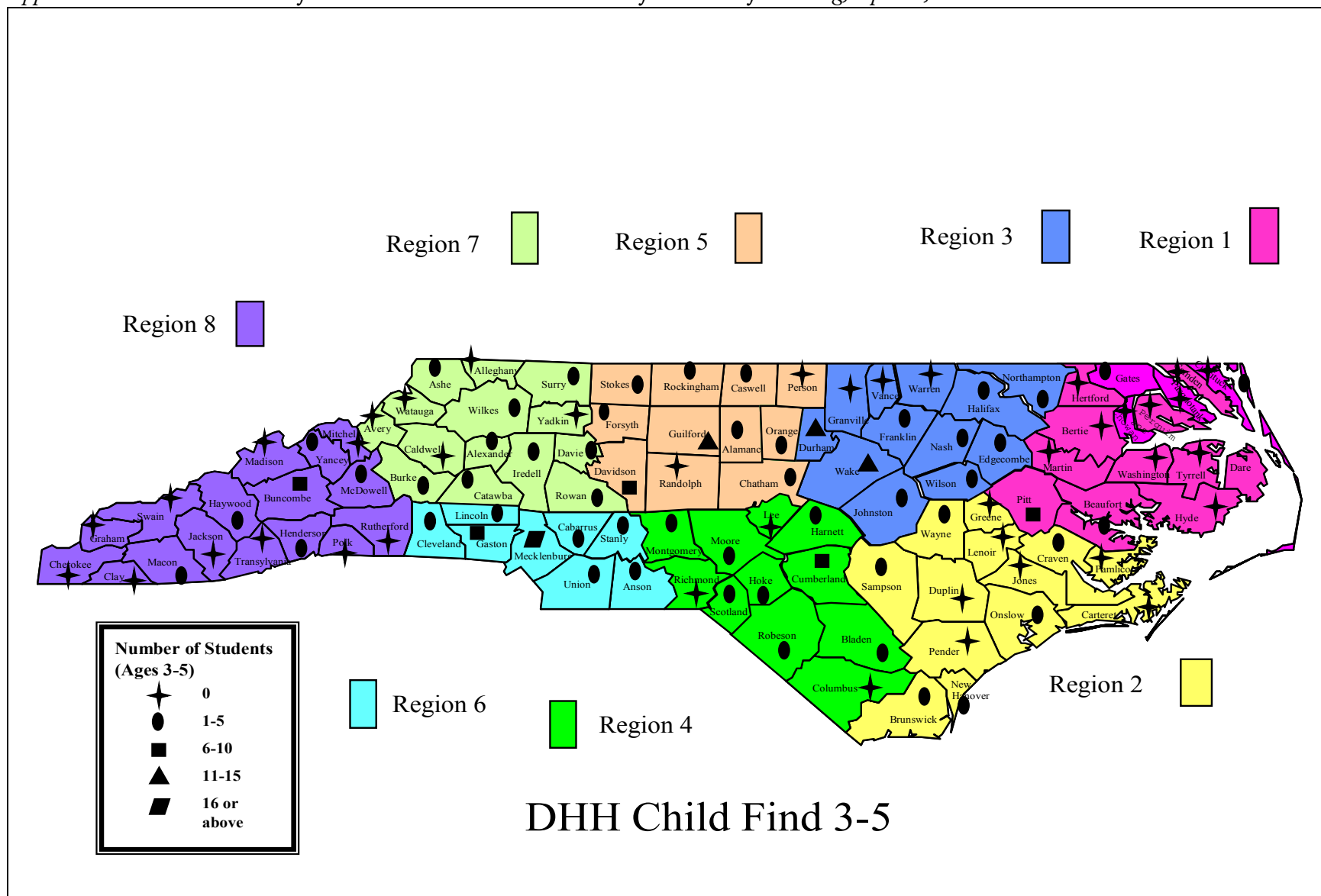
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| <ul style="list-style-type: none"><li>◆ Providing effective PD to service providers who do not have access.</li></ul> | <ul style="list-style-type: none"><li>◆ Develop regional professional development plans in conjunction with the wider early childhood community including those in the non-public sector.</li></ul> |
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## References

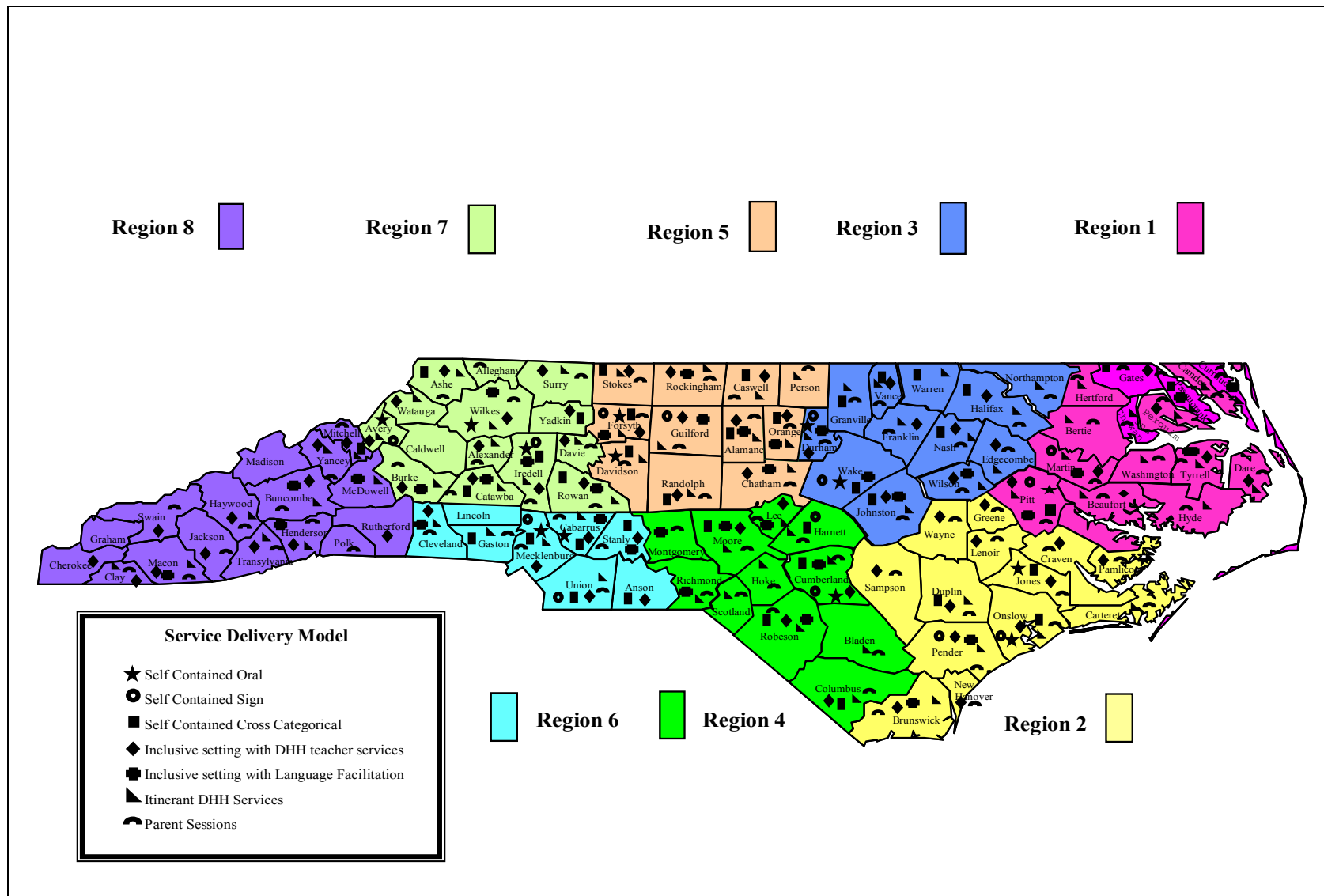
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Appendix 1. Child Headcount for Preschool Children who are Deaf or Hard-of-Hearing, April 1, 2009



*Appendix 2. Service Delivery Models provided to Preschool Children who are Deaf or Hard-of-Hearing, October 2009*



*Appendix 3. Regional Analysis by Service Delivery Models and April 1 Headcount*

*Note: Shaded areas denote service delivery model used; number of responses relates to the number of participants in the zoomerang survey*

	Service Delivery Models for Preschool Deaf & Hard-of-Hearing Children										Headcount	
	SC D/HH auditory-oral class	SC D/HH signing class	SC D/HH TC class	SC cross-categorical	Inclusive PK class with consult by D/HH teacher	Inclusive PK class w direct services by D/HH teacher using pull-out model	Inclusive PK class with direct services by D/HH teacher using an embedded and integrated model (push-in)	Inclusive PK class with language facilitator	Itinerant deaf & Hard-of-Hearing services	Auditory-verbal parent participation sessions	PK Children ages 3, 4, 5 Years of Age as of April 1, 2009 Headcount for HI/D	PK April 1, 2009 Head count for All Categories
REGION 1												
Beaufort	0	0	0	0	1	1	0	0	3	2	2	100
Bertie	0	0	0	0	0	0	0	0	2	2		40
Camden	0	0	0	0	0	0	0	0	2	2		17
Currituck	0	0	0	0	0	0	0	1	2	2		34
Dare	0	0	0	0	1	1	0	0	3	2	1	88
Edenton/Chowan	0	0	0	0	0	0	0	0	2	2		20
Elizabeth City/Pasquotank	0	0	0	1	0	0	0	1	2	2		102
Gates	0	0	0	1	0	0	0	0	2	2	1	39
Hertford	0	0	0	0	0	0	0	0	2	2		20
Hyde	0	0	0	0	0	0	0	0	1	2		8
Martin	1	0	0	0	1	1	0	3	3	4		65
Perquimans	0	0	0	0	1	0	0	0	2	2		32
Pitt	2	2	2	2	4	8	4	7	7	5	8	246
Tyrrell	0	0	0	0	2	2	1	2	2	2		10
Washington	0	0	0	0	0	0	0	0	3	2		41

<b>Totals</b>											12	862
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*Appendix 3. Regional Analysis by Service Delivery Models and April 1 Headcount*

	Service Delivery Models for Preschool Deaf & Hard-of-Hearing Children										Headcount	
	SC D/HH auditory-oral class	SC D/HH signing class	SC D/HH TC class	SC cross-categorical	Inclusive PK class with consult by D/HH teacher	Inclusive PK class w direct services by D/HH teacher using pull-out model	Inclusive PK class with direct services by D/HH teacher using an embedded and integrated model (push-in)	Inclusive PK class with language facilitator	Itinerant deaf & Hard-of-Hearing services	Auditory-verbal parent participation sessions	PK Children ages 3, 4, 5 Years of Age as of April 1, 2009 Headcount for HI/D	PK April 1, 2009 Head count for All Categories
<b>REGION 2</b>												
Brunswick	0	0	0	0	0	1	0	2	3	2	2	127
Carteret	0	0	0	0	0	0	0	0	1	2		96
Clinton City												28
Craven	0	0	0	0	0	0	0	0	1	2	3	154
Duplin	0	0	0	1	0	0	1	0	3	3		93
Greene	0	0	0	0	0	0	0	0	1	1		45
Jones	1	0	0	3	0	0	0	0	2	3		22
Lenoir	0	0	0	0	0	0	0	0	1	3		93
New Hanover	0	0	0	0	0	0	0	0	1	1	3	187
Onslow	1	1	1	1	3	2	2	0	2	2	2	73
Pamlico	0	0	0	0	0	0	0	0	1	2		26
Pender	0	0	0	1	1	0	1	1	2	2		75
Sampson	0	0	0	0	0	0	0	0	3	3	1	89
Wayne	0	0	0	0	0	0	0	0	1	2	3	264
<b>Totals</b>											14	1372



*Appendix 3. Regional Analysis by Service Delivery Models and April 1 Headcount*

	Service Delivery Models for Preschool Deaf & Hard-of-Hearing Children										Headcount	
	SC D/HH auditory-oral class	SC D/HH signing class	SC D/HH TC class	SC cross-categorical	Inclusive PK class with consult by D/HH teacher	Inclusive PK class w direct services by D/HH teacher using pull-out model	Inclusive PK class with direct services by D/HH teacher using an embedded and integrated model (push-in)	Inclusive PK class with language facilitator	Itinerant deaf & Hard-of-Hearing services	Auditory-verbal parent participation sessions	PK Children ages 3, 4, 5 Years of Age as of April 1, 2009 Headcount for HI/D	PK April 1, 2009 Head count for All Categories
<b>REGION 3</b>												
Durham	1	0	1	0	2	3	2	1	2	1	15	341
Edgecombe	0	0	0	0	1	1	0	0	1	2	3	64
Franklin	0	0	0	0	1	0	0	0	4	3	2	68
Granville	0	0	0	1	0	1	0	0	2	1		66
Halifax	0	0	0	1	1	1	0	0	1	2	1	44
Johnston	0	0	0	3	3	3	3	1	8	3	2	251
Nash	0	0	0	1	1	1	1	0	2	1	1	162
Northampton	0	0	0	0	0	0	0	0	1	1	1	20
Roanoke Rapids City											1	36
Vance	0	0	0	1	1	1	0	0	1	1		62
Wake	3	0	2	1	1	2	3	1	8	10	22	1168
Warren	0	0	0	1	0	0	0	0	2	0		47
Weldon City												15
Wilson	0	0	0	0	2	0	0	1	3	3	2	50
<b>Totals</b>											50	2394

*Appendix 3. Regional Analysis by Service Delivery Models and April 1 Headcount*

	Service Delivery Models for Preschool Deaf & Hard-of-Hearing Children										Headcount	
	SC D/HH auditory-oral class	SC D/HH signing class	SC D/HH TC class	SC cross-categorical	Inclusive PK class with consult by D/HH teacher	Inclusive PK class w direct services by D/HH teacher using pull-out model	Inclusive PK class with direct services by D/HH teacher using an embedded and integrated model (push-in)	Inclusive PK class with language facilitator	Itinerant deaf & Hard-of-Hearing services	Auditory-verbal parent participation sessions	PK Children ages 3, 4, 5 Years of Age as of April 1, 2009 Headcount for HI/D	PK April 1, 2009 Head count for All Categories
<b>REGION 4</b>												
Bladen	0	0	0	0	0	0	0	0	3	3		34
Columbus	0	0	0	2	2	1	0	0	4	4		47
Cumberland	5	3	5	3	4	4	5	2	8	6	9	457
Harnett	0	0	1	2	2	2	1	0	4	3	1	144
Hoke	0	0	0	0	0	0	0	0	1	1	2	92
Lee	0	0	0	0	3	4	2	6	1	2		97
Montgomery	0	0	0	0	0	0	0	1	0	1	1	33
Moore	0	0	0	3	7	7	3	5	5	1	4	179
Richmond	0	0	0	0	0	0	0	1	1	2		66
Robeson	0	0	0	1	1	1	1	1	5	2	4	553
Scotland	0	0	0	0	0	0	0	0	2	2	1	62
Whiteville City											1	23
<b>Totals</b>											23	1787

*Appendix 3. Regional Analysis by Service Delivery Models and April 1 Headcount*

	Service Delivery Models for Preschool Deaf & Hard-of-Hearing Children										Headcount	
	SC D/HH auditory- oral class	SC D/HH signing class	SC D/HH TC class	SC cross- categorical	Inclusive PK class with consult by D/HH teacher	Inclusive PK class w direct services by D/HH teacher using pull- out model	Inclusive PK class with direct services by D/HH teacher using an embedded and integrated model (push-in)	Inclusive PK class with language facilitator	Itinerant deaf & Hard-of- Hearing services	Auditory- verbal parent participa- tion sessions	PK Children ages 3, 4, 5 Years of Age as of April 1, 2009 Headcount for HI/D	PK April 1, 2009 Head count for All Categor- ies
<b>REGION 5</b>												
Alamance	0	0	0	2	1	3	1	1	3	5	2	207
Asheboro City											2	57
Caswell	0	0	0	1	1	0	0	0	1	1	1	31
Chapel Hill Carrboro City											1	57
Chatham	0	0	0	0	2	1	0	1	1	1	1	128
Davidson	1	0	0	2	2	2	1	0	0	3	6	236
Forsyth	3	0	1	3	4	7	3	3	7	4	5	482
Guilford	0	0	0	1	2	2	1	1	4	3	12	735
Lexington Cty												40
Orange	0	0	0	1	6	2	2	1	4	2	1	61
Person	0	0	0	0	0	0	0	0	1	1		59
Randolph	0	0	0	1	0	1	1	0	2	1		120
Rockingham	0	0	0	0	1	1	1	1	1	2	2	269
Stokes	0	0	0	1	1	2	1	0	2	1	1	98
Thomasville CTY												30
<b>Totals</b>											34	2610

*Appendix 3. Regional Analysis by Service Delivery Models and April 1 Headcount*

	Service Delivery Models for Preschool Deaf & Hard-of-Hearing Children										Headcount	
	SC D/HH auditory-oral class	SC D/HH signing class	SC D/HH TC class	SC cross-categorical	Inclusive PK class with consult by D/HH teacher	Inclusive PK class w direct services by D/HH teacher using pull-out model	Inclusive PK class with direct services by D/HH teacher using an embedded and integrated model (push-in)	Inclusive PK class with language facilitator	Itinerant deaf & Hard-of-Hearing services	Auditory-verbal parent participation sessions	PK Children ages 3, 4, 5 Years of Age as of April 1, 2009 Headcount for HI/D	PK April 1, 2009 Headcount for All Categories
<b>REGION 6</b>												
Anson	0	0	0	1	1	0	0	0	0	0	1	78
Cabarrus	2	0	0	1	1	1	1	1	1	7	3	233
Cleveland	0	0	0	0	2	2	0	2	2	2	4	176
Gaston	0	0	0	1	0	0	0	0	2	2	9	248
Kannapolis City											2	72
Lincoln	0	0	0	0	0	1	0	0	1	3	2	124
Mecklenburg	4	1	2	1	2	4	2	0	4	7	32	1118
Stanly	0	0	0	1	1	1	1	1	0	4	2	100
Union	0	0	1	2	2	1	2	0	2	1	2	357
<b>Totals</b>											57	2506

REGION 7	Service Delivery Models for Preschool Deaf & Hard-of-Hearing Children										Headcount	
	SC D/HH auditory-oral class	SC D/HH signing class	SC D/HH TC class	SC cross-categorical	Inclusive PK class with consult by D/HH teacher	Inclusive PK class w direct services by D/HH teacher using pull-out model	Inclusive PK class with direct services by D/HH teacher using an embedded and integrated model (push-in)	Inclusive PK class with language facilitator	Itinerant deaf & Hard-of-Hearing services	Auditory-verbal parent participation sessions	PK Children ages 3, 4, 5 Years of Age as of April 1, 2009 Headcount for HI/D	PK April 1, 2009 Head count for All Categories
Alexander	0	0	0	0	0	1	0	0	2	2	1	57
Alleghany	0	0	0	0	0	0	0	0	0	1		22
Ashe	0	0	0	1	1	0	1	0	1	0	1	65
Avery	1	1	1	0	1	0	0	0	1	0		24
Burke	0	0	0	0	2	1	1	2	2	4	5	224
Caldwell	0	0	0	0	0	0	0	0	0	0		143
Catawba	0	0	0	1	1	3	1	2	2	3	2	137
Davie	0	0	0	0	0	2	0	0	1	1	1	69
Elkin City												10
Hickory City											1	50
Iredell	1	1	1	2	0	1	1	1	2	3	2	135
Mooreville City												54
Mount Airy City												30
Newton Conover City												28
Rowan	0	0	0	4	1	2	1	2	2	3	3	138
Surry	0	0	0	0	1	1	2	0	2	1	1	91
Watauga	0	0	0	0	1	0	0	0	1	0		63
Wilkes	0	1	1	0	1	3	1	3	1	0	2	121
Yadkin	0	0	0	2	2	0	1	0	0	0		113
<b>Totals</b>											19	1574

	Service Delivery Models for Preschool Deaf & Hard-of-Hearing Children										Headcount	
	SC D/HH auditory-oral class	SC D/HH signing class	SC D/HH TC class	SC cross- categorical	Inclusive PK class with consult by D/HH teacher	Inclusive PK class w direct services by D/HH teacher using pull- out model	Inclusive PK class with direct services by D/HH teacher using an embedded and integrated model (push-in)	Inclusive PK class with language facilitator	Itinerant deaf & Hard-of- Hearing services	Auditory- verbal parent participation sessions	SC D/HH auditory-oral class	SC D/HH signing class
REGION 8												
Asheville City											2	63
Buncombe	0	0	0	0	3	2	4	2	3	2	8	251
Cherokee	0	0	0	0	0	1	0	0	0	0		45
Clay	0	0	0	0	0	0	0	0	0	0		14
Graham	0	0	0	0	0	0	0	0	0	0		11
Haywood	0	0	0	0	2	1	0	0	1	1	2	99
Henderson	0	0	0	1	0	1	1	1	1	2	5	105
Jackson	0	0	0	0	2	1	0	0	0	1		54
Macon	0	0	0	0	3	3	3	4	1	2	2	95
Madison	0	0	0	0	0	0	0	0	0	0	1	41
McDowell	0	0	0	0	0	0	0	1	1	0	2	96
Mitchell	0	0	0	1	1	0	0	0	2	1		24
Polk	0	0	0	0	0	0	0	0	0	1		21
Rutherford	0	0	0	0	1	0	0	0	0	0		65
Swain	0	0	0	0	1	0	0	0	0	1		54
Transylvania	0	0	0	0	1	1	0	0	1	1		45
Yancey	0	0	0	0	1	0	0	0	2	1	1	38
Totals											23	1121

*Appendix 4. Regional Analysis of Professional Development Needs*

Area of Training	State	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8
Working with families: Active Listening Techniques/Consultation Skills	3.51	3.41	4.17	3.81	3.58	3.86	3.94	3.48	3.38
Auditory Development and Hierarchy	3.43	3.15	3.52	3.72	3.67	3.79	3.67	3.38	3.55
Collaboration with others	3.48	2.88	3.31	3.40	3.72	3.85	3.31	3.88	3.70
Cued Speech	2.91	2.57	2.73	2.83	3.39	3.02	3.23	3.29	3.18
Early Literacy	3.70	3.34	3.81	4.22	4.12	4.15	3.98	3.65	3.88
Impact on families	3.28	3.09	3.50	3.78	3.49	3.65	3.50	3.48	3.65
Including Families in the Intervention Process	3.55	3.40	3.83	4.06	3.80	4.02	3.75	3.54	3.75
Teaching Parents to Provide Positive Behavior Support	3.69	3.34	4.04	4.13	3.94	4.11	3.92	3.67	3.93
Foundations: NC Early Learning Standards	3.42	3.52	3.06	3.40	3.43	3.83	3.25	3.35	3.40
Utilizing Language Facilitators and Interpreters	3.43	2.26	2.27	3.15	3.74	3.79	3.52	3.60	3.78
Working with Families, Parents as Teachers	3.66	3.40	4.06	4.08	3.90	4.06	3.94	3.40	3.83
Understanding the Variety of Communication Options for DHH Students	3.38	3.02	3.48	3.75	3.51	3.67	3.52	3.63	3.38

